

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

TIVO INC.,

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD., and  
SAMSUNG ELECTRONICS AMERICA,  
INC.

Defendants.

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SAMSUNG ELECTRONICS CO., LTD. and  
SAMSUNG ELECTRONICS AMERICA,  
INC.,

Counterclaim Plaintiffs,

v.

TIVO INC.

Counterclaim Defendant.

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Case No. 2:15-cv-1503

**JURY TRIAL DEMANDED**

**SAMSUNG'S OPENING CLAIM CONSTRUCTION BRIEF**

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## **I. INTRODUCTION**

Samsung alleges that TiVo infringes four patents: U.S Patent Nos. 5,978,043 (the “’043 patent”); 6,181,333 (the “’333 patent”); 7,231,592 (the “’592 patent”); and 8,233,090 (the “’090 patent”). The ’043 and ’333 patents generally pertain to graphical user interfaces (“GUIs”) for controlling television systems, and the ’090 and ’592 patents generally pertain to controlling home devices over a network. Samsung respectfully submits this brief to address the disputed claim terms from each of these four patents.

## **II. RELEVANT LEGAL PRINCIPLES**

Given this Court’s familiarity with the principles of claim construction, Samsung does not provide a discussion of the law here, but rather cites precedent specific to the disputed terms as applicable throughout the sections below.

## **III. TECHNOLOGY OVERVIEW**

### **A. Overview of the ’043 and ’333 Patents**

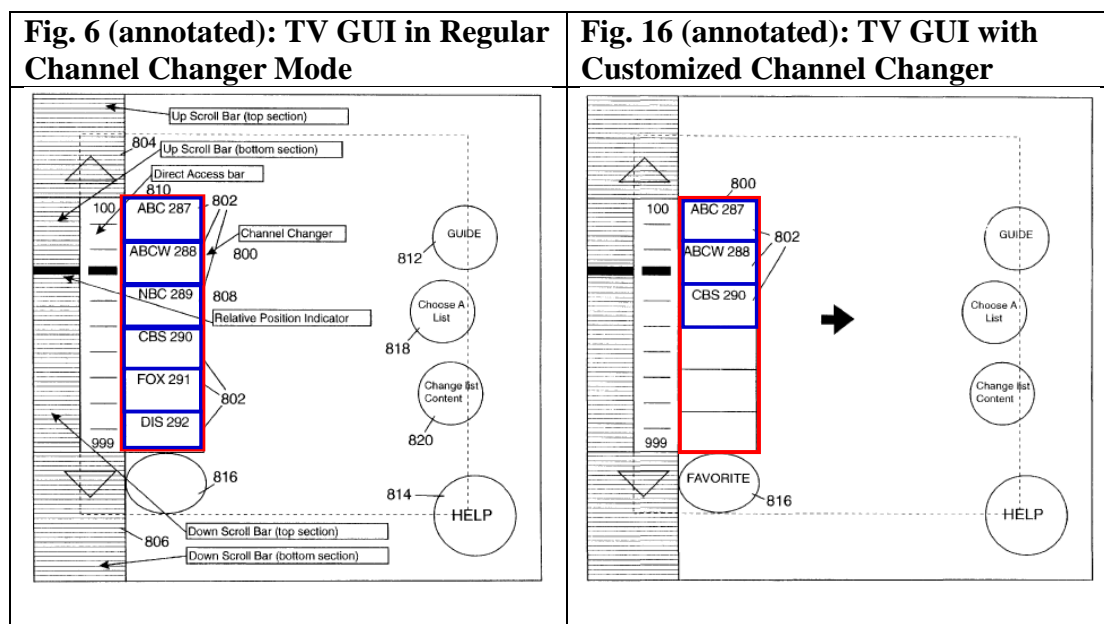
The ’043 and ’333 patents issued from related applications dating back to 1996. In brief, the claimed inventions address difficulties at that time in quickly locating and selecting a desired TV channel from among many. Samsung has asserted claim 1 of the ’043 patent and claims 1, 2, 7, and 19 of the ’333 patent.

The ’043 and ’333 patents “relate[] to . . . a novel TV graphical user interface (GUI).” ’043 Patent at 1:9-12; ’333 Patent at 1:9-13. A GUI refers to graphics-based software that processes commands entered by a user and enables information to be passed to the user. Ex. G ¶ 22. Before these patents, rudimentary graphical interfaces could be used in television systems to “show a list of TV channels, programs, and services.” ’043 Patent at 2:13-14; ’333 Patent at 2:15-17; Ex. G ¶ 22-23. The ’043 and ’333 interfaces improve over prior art GUIs by facilitating

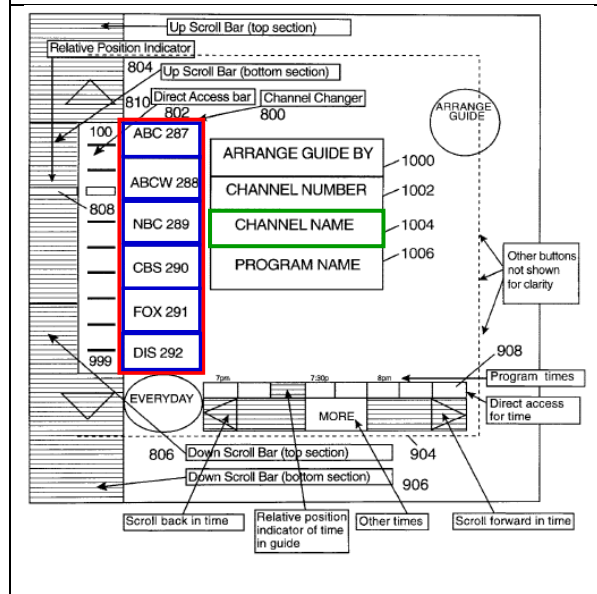
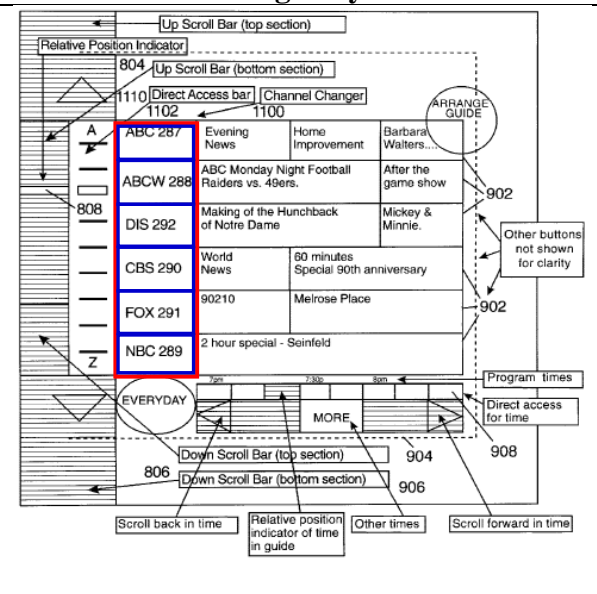
a user's ability to select a desired channel from among many. '043 Patent at 2:13-36; '333 Patent at 2:16-27.

The '043 and '333 interfaces display certain graphical objects on a TV screen. *See* '043 Patent at 8:60-9:4; '333 Patent at 8:62-9:6. Two of these objects are a "graphical channel changer" with "graphical channel boxes" or "channel objects" that enable a user to select a particular channel. '043 Patent at 9:23-32; '333 Patent at 9:26-33, 10:52-11:29. Each channel box represents a TV channel. '043 Patent at 9:23-32; '333 Patent at 9:26-33. When a user selects a particular channel box, the GUI will cause the television system to tune to the corresponding channel. '043 Patent at 9:56-11:4; '333 Patent at 10:28-45.

The '043 interface allows a user to build a customized list of any arbitrarily selected subset of TV channels. '043 Patent at 10:37-12:47. When the user finishes building the custom list, the channel changer can display only the user-selected channels, or it can display all available channels. *Id.* at 12:48-58. Advantageously, "[t]he position, configuration and operations" of the channel changer remains unchanged, regardless of whether all TV channels or only a customized list of TV channels is shown. *Id.* at 12:59-64. "Therefore, the user remains in a familiar environment and does not need to adapt to a new format on the screen." *Id.* Figures 6 and 16, shown annotated below, depict the '043 TV GUI as it initially displays all TV channels and subsequently displays only the user-selected list of TV channels. The red boxes indicate the channel changer, and the blue boxes indicate channel objects.



The '333 interface allows a user to rearrange channel object order. '333 Patent at 11:44-12:8. After the user selects the appropriate option, the channel objects are rearranged by channel name, but the channel changer maintains an identical configuration. *Id.* at 12:9-30 (“[In Fig. 9, t]he channel changer 1100 is composed of channel boxes 1102 positioned on the TV screen at the same locations as the channel boxes 802 displayed in the channel changer and program guide modes.”). As with the '043 patent, “the user [of the '333 GUI] remains in a familiar environment and does not need to adapt to a new format on the screen.” *Id.* Figure 8 and 9, shown annotated below, depict the '333 TV GUI as it initially displays channel objects by number, as the user chooses to rearrange the channels, and then as the TV GUI displays channel objects by name. The red boxes indicate the channel changer, and the blue boxes indicate channel objects, and the green box indicates the user’s decision to rearrange the channels.

**Fig. 8 (annotated): TV GUI in Arrange Guide Mode****Fig. 9 (annotated): TV GUI in Program Guide Mode Arranged by Channel Names**

## B. Overview of the '592 and '090 Patents

### 1. The '592 Patent

The '592 patent dates back to 1997 and is directed to a “method and system ... for detecting, commanding and controlling diverse home devices currently connected to a home network.” '592 Patent at Abstract. The '592 patent acknowledges the increasing number of “home devices” in a person’s home, such as TVs, VCRs, and digital broadcast systems. *Id.* at 1:32-38. This, in turn, presented a need to more easily control such home devices than with a traditional remote control. *Id.* at 1:65-2:19. The '592 Patent’s solution was a method and system whereby a home device connected to a network could control, according to user input through a user interface, another home device connected to the network. *See id.* at claim 1, 2:30-35 (“The present invention accordingly provides a method for providing an interface for accessing home devices that are currently connected to a home network, to enable a user to communicate with, to command and to control such home devices.”). Samsung asserts '592 Patent claims 1, 2, 4-7, 12, 13, 15, and 17-19 against the TiVo accused products.

## 2. The '090 Patent

The '090 Patent dates back to 1997 and is directed to a method of linkage-viewing a television program such that a user watching a program on his or her mobile device (e.g. a cellular phone) can transition the watching experience to a television. '090 Patent at Abstract. A user can initiate the linkage-viewing method by, e.g., pressing a button on the user's mobile device. *Id.* at 2:44-47 ("According to an aspect of the present invention, the inputting the TV linkage viewing command is achieved using a TV linkage-viewing button which is provided in the mobile communication apparatus."). Upon receiving a linkage-viewing command, information on the program being viewed on the mobile device is transmitted such that the program can successively be viewed on the television. *Id.* at 5:45-49. Samsung asserts '090 Patent claims 1, 2, and 4 against the TiVo accused products.

## IV. CLAIM CONSTRUCTION ARGUMENTS

Because the '043 and '333 patents are closely related, their disputed terms are collectively presented. The '592 and '090 patent terms are separately presented in turn.

### A. U.S. Patent Nos. 5,978,043 and 6,181,333

#### 1. "channel object" ('333 Patent, claims 1, 7, 19)

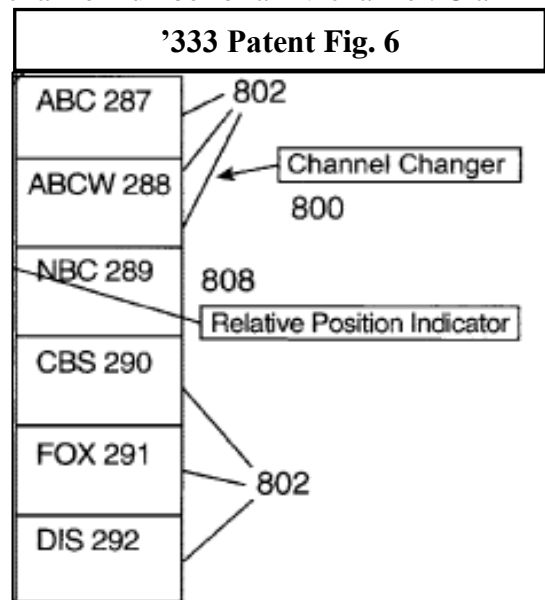
Samsung's Proposed Construction	TiVo's Proposed Construction
"a selectable graphical user interface object that depicts a channel name and channel number of a TV channel"	"an icon indicating a TV channel"

Claims 1, 3, and 19 of the '333 patent recite graphical "channel objects" that identify both the name and number associated with TV channels. TiVo's proposed construction improperly substitutes the word "icon" for "object," jettisons the fundamental name and number requirements, and fails to reflect the graphical user interface context in which this claim term is rooted, thus framing the parties' dispute. *See* Ex. G ¶¶ 27-34.



“Channel objects” are graphical user interface objects, not mere icons, as the specification confirms with its initial statement that it “relates to . . . a novel TV graphical user interface.” ’333 Patent at 1:9-13. The plain claim language follows suit. Claim 1 recites a **graphical** channel changer comprising channel objects. *Id.* at 14:30-32. Claim 19 similarly recites that a “**graphical** channel selector having . . . channel objects” that is **displayed** by a television system. *Id.* at 16:15-27 (emphasis added). That these elements are “displayed” and “graphical” indicates that the graphical channel changer/selector and channel objects are graphical user interface objects. Furthermore, the ’333 patent specification describes “channel objects” or “channel boxes” as graphical components of a channel changer, consistent with the plain claim language. *Id.* at 9:28-33 (“[A] TV set . . . displays a graphical channel changer 800 having a vertical channel bar that includes graphical channel boxes 802.”).

A channel object depicts the channel name and channel number of a TV channel. Claim 1 requires that channel objects can be “arranged . . . according to numbers of . . . TV channels” or by “names of . . . TV channels.” ’333 Patent at 14:28-39. Likewise, claim 19 requires that channel objects be arranged to identify TV channels by “channel numbers” or “channel names.” *Id.* at 16:15-27. Sorting by and displaying channel names makes it easier “to find a required channel . . . if a user does not know the number of the required channel.” ’333 Patent at 2:15-28; Ex. G ¶ 29. The ’333 patent specification generally refers to channel objects as “channel boxes 802,” and consistently describes these elements as depicting channel numbers **and** logos or names. ’333 Patent at



Abstract (“[C]hannel boxes that display numbers and logos of selected TV channels”); *id.* at 9:32-33, 10:4-7 (“[T]he channel boxes 802 display numbers and logos of TV channels represented by that selected region.”), 10:29-31, 14:6-7. Figure 6 illustrates channel boxes 802 with channel names and numbers.

Still another requirement of “channel objects” is that they permit selection of a channel. Claim 1 expressly recites that “the graphical channel changer (which includes channel objects) allows *selection* of a desired TV program.” (emphasis added). Likewise, claim 19 recites that the channel objects are part of a graphical channel *selector*. The ’333 specification teaches “[t]o switch the TV set to a required TV channel” a cursor is used to select “the graphical channel box 802 that contains the number and logo of the required channel.” *Id.* at 10:28-44. “In response to the user command, the CPU 318 sends a tune command to the RF tuner 302 to tune the satellite receiver 300 to the required TV channel.” *Id.* The ’333 patent prosecution history further confirms that the claimed channel objects are selectable. The patentee explained that “icons 202(a)-202(c)” of a prior art reference “merely allow a user to *see* the programming schedule corresponding with the selected channel and *does not function to change the channel* to the desired station.” Ex. B at 15-17 (’333 File History, Mar. 15, 2000 Response 4-6) (emphasis added).

TiVo’s proposed construction of a channel object as an “icon” oversimplifies this claim term and conflates the above-cited prosecution history. Dependent claims of the ’043 patent, which is closely related to the ’333 patent, recite channel objects, and teach embodiments in which channel objects may be dragged and dropped to create customized list. *See* ’043 Patent at 13:53-14:3. This relatively complex functionality indicates that channel objects are graphical user interface objects, rather than mere abstract “icons” as TiVo proposes. Ex. G ¶ 33. Further,

TiVo’s proposed construction improperly fails to acknowledge that channel objects are selectable graphical user interface elements that depict **both** the channel name and channel number.

2. “channel changer” / “graphical channel changer” / “channel selector” / “graphical channel selector” (’043 Patent, claim 1 and ’333 Patent, claims 1, 2, 19)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
“a graphical user interface element including channel objects that allows selection of and tuning to a channel”	“A list of TV channels—from which a TV channel may be selected—that a user may access and navigate independent of an electronic program guide or any program-specific information”

The parties appear to agree that “channel changer,” “graphical channel changer,” “channel selector,” and “graphical channel selector” refer to the same element, an agreement borne out by the plain claim language and specification disclosures. A person of ordinary skill in the art would share this view. Ex. G ¶¶ 35-39. However, TiVo’s construction strips the graphical user interface context from this term and ignores the critical feature that the channel changer allows selection of and tuning to a channel. Further, TiVo’s construction improperly attempts to read in certain limitations from the specification. *See id.* ¶¶ 35-46.

The graphical channel changer/selector claim terms, like the preceding “channel object” term, refer to a graphical user interface element. More particularly, the graphical channel changer/selector includes channel objects. Claim 1 of the ’333 patent recites a **graphical** channel changer **comprising** channel objects. ’333 Patent at 14:30-32. Claim 19 similarly recites a “**graphical** channel selector **having** . . . channel objects” that is **displayed** by a television system. *Id.* at 16:15-27 (emphasis added). The ’043 and ’333 patent specifications confirm this. The ’333 Patent teaches that channel objects are part of the claimed graphical channel changer, regardless of the state of the television system GUI. *Id.* at 9:26-33 (channel changer mode), 11:24-29

(program guide mode), 12:13-16 (arrange guide mode). The '043 Patent teaches that the “graphical channel changer 800” has “graphical channel boxes 802 representing TV channels available in the satellite receiver 300.” '043 at 9:23-33. Figures 6 of both patents are identical in relevant part and illustrate a “TV GUI” with “graphical channel changer 800” and “channel boxes 802.” '043 Patent at 9:23-32; '333 Patent at 9:25-33.

The graphical channel changer/selector allows selection of and tuning to a channel. Claim 1 of the '043 Patent recites that the regular and customized channel changers “enabl[e] the user to select a TV channel.” '043 Patent at 13:31-32, 13:35. Likewise, claim 1 of the '333 patent recites that the “graphical channel changer allows *selection* of a desired TV program,” '333 Patent at 14:38-39 (emphasis added), and claim 19 recites a graphical *channel selector*. *Id.* at 16:21. The patent specifications teach that “graphics on the TV set screen may represent a graphical channel changer that enables a user to select TV channels.” '333 Patent at 6:21-28; '043 Patent at 6:17-24 (same). A “user may press a select button . . . to tune to the required channel” and in response “the CPU 318 sends a tune command . . . to tune . . . to the required TV channel.” '333 Patent at 10:41-45; '043 Patent at 9:67-10:4.

The '333 patent file history confirms that the graphical channel changer/selector allows channel selection and tuning. In the same Office Action response discussed above, the patentee successfully showed that the “Miller [reference] does not disclose a graphical channel changer [because the cited] icons 202(a)-202(c) merely allow a user to *see* the programming schedule corresponding with the selected channel and *does not function to change the channel* to the desired station.” Ex. B at 15-17 ('333 File History, Mar. 15, 2000 Response 4-6) (emphasis added). To clarify this point, the patentee amended claim 1 to recite that the graphical channel changer of the channel objects must allow “selection of a desired TV program for viewing.”

of operation, said channel objects are arranged by said CPU according to names of said TV channels; and  
 whereby said graphical channel changer allows selection of a desired TV program for viewing.

*Id.* at 2; *id.* at 4-6 (“Amended Claim 1 is now clearly unobvious and novel because it discloses the ability to *select* a desired channel for viewing in addition to selecting programming information for a desired channel or a plurality of channels.”).

TiVo’s proposed construction confusingly introduces a requirement that graphical channel objects are not components of a graphical user interface, but rather are “independent.” Even divorced of ’043 and ’333 specific context, a person of ordinary skill would understand “electronic programming guide” to generally mean a graphical user interface that displays TV channel and/or TV program information on a television system. Ex. G ¶ 46. TiVo’s construction thus misleads by suggesting that a channel changer may exist *independently* of a graphical user interface of a television system. Because a channel changer is part of the claimed television GUI, such an interpretation would be nonsensical. *Id.*

### 3. “customized list” (’043 Patent, claim 1)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
“a user selected list of channels for display in a list object”	Plain Meaning/ No Construction Necessary

Claim 1 of the ’043 patent recites a customized channel changer that enables a user to select a TV channel among a “customized list” of TV channels. Divorced of context, “customized list” could have many meanings, and is not a term of art that would be recognized by a person of ordinary skill. Ex. G ¶ 47. Claim construction is thus needed for this term.

As an initial matter, the customized list is *user* selected, as confirmed by the surrounding claim context. The patent teaches that the graphical channel changer “allows the user to include

*any* combination of TV channels into a channel list to be displayed.” ’043 Patent at 10:37-39 (emphasis added). The user can classify channels as “everyday,” “favorite,” or “theme” to build customized lists. ’043 Patent at 2:16-24. For example, “[t]he everyday list would include channels that the *user* wants to watch every day” and “[t]he favorite list would combine favorite TV channels” and “[t]he theme list would contain TV channels relating to a specific theme.” *Id.* (emphasis added).

Other portions of the ’043 patent refine *how* the user selects channels of the “customized list.” The dependent claims recite that a user can arbitrarily select channels for the customized list with a remote pointing device. For example, claim 9, which incorporates the limitations of claims 6, 7, and 8, recites a television system where a user can drag and drop selected channels into the customized list. ’043 Patent at 13:53-14:3. This drag and drop procedure is reflected in the steps described at ’043 Patent at 3:17-40, which include “depressing a button . . . to move the selected channel object” and “releasing the button to place the selected channel object . . . to include a TV channel . . . into the customized list.” *Id.* These steps indicate that a user could arbitrarily select channels to add or remove to the customized list. *See also id.* at 11:42-12:42. In contrast, other television systems may permit users to select from a subset of *system*-selected channels. Ex. G ¶ 48.

The channels of a “customized list” are displayed in a graphical user interface object referred to as a “list object” that displays a customized list of TV channel objects. *Id.* at 3:14-16 (“Preferably, the list object comprises a two-dimensional grid of cells, each of which has the same size as each of the channel objects”). For example, claim 4 recites that a “list object indicative of the TV channels in said customized list” is displayed together with the channel changer. *Id.* at 13:45-49.

In sum, Samsung’s construction is preferable to no construction, as TiVo proposes, because Samsung’s proposed construction captures that a user must be able to customize a list of channels, and that the channels of a customized list are represented in a list object. *See* Ex. G ¶¶ 47-51.

4. “said customized channel changer having the same configuration as said regular channel changer” (’043 Patent, claim 1)

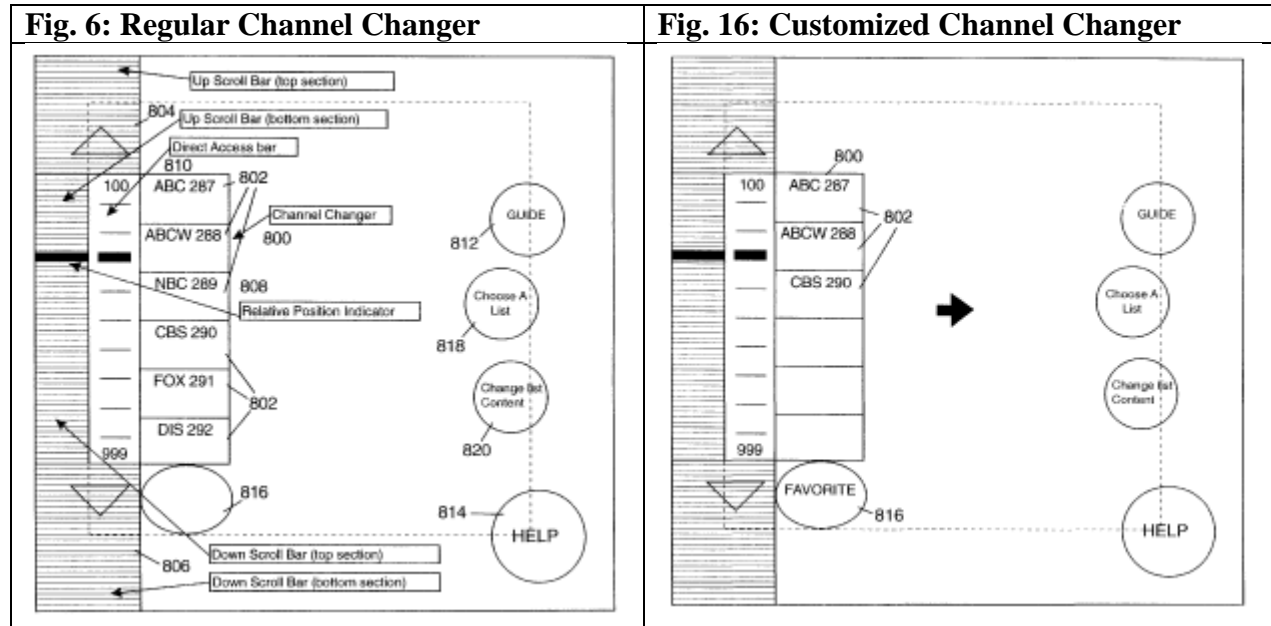
Samsung’s Proposed Construction	TiVo’s Proposed Construction
“the on screen location and format of the channel objects of the channel changers remain the same between the first and second modes”	Plain Meaning/ No Construction Necessary

The ’043 patent teaches that the regular channel changer and the customized channel changer have the “same configuration.” Removed from context, “same configuration” could have many meanings, and is not a term of art that would be recognized by a person of ordinary skill. Ex. G ¶ 52. Thus, claim construction is helpful to understand this term.

As explained, the ’043 patent recites a television system that enables selection of all TV channels using a “regular channel changer” in a first mode and from a customized list of TV channels using a “customized channel changer” in a second mode. Because the channel changers are “graphical” in nature, for them to have the “same configuration” refers to these elements as having the same *graphical* configuration.

Figure 6 of the ’043 Patent depicts a regular channel changer, and Figure 16 depicts a “channel changer 800 for a customized list of TV channels.” ’043 Patent at 12:59-64. As graphical user interface elements, the channel changers and channel objects are represented by an addressable two-dimensional array of pixels. *Id.* at 8:37-9:4. The ’043 patent specification teaches that “position, configuration and operations” of these channel changers “remain

unchanged.” *Id.* Visual inspection shows that the channel changers 800 in figures 6 and 16 have the same on screen location and format on the TV monitor.



Samsung’s construction is preferable to no construction, as TiVo proposes, because Samsung’s construction clarifies the requirement that graphical user interface channel changers have the same graphical configuration. *See* Ex. G ¶¶ 52-55.

## B. U.S. Patent No. 7,231,592

### 1. “home device” (’592 Patent, claims 1, 2, 4, 5, 6, 7, 12, 13, 17, 18, 19)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
a controllable <del>networked</del> <sup>1</sup> [electronic] device typically found in the home, other than a general purpose computer (i.e. personal computer or laptop)	Electronic devices that are typically found in the home, with the exception of general purpose computers (i.e. personal computers (PCs ), laptop computers, etc.)

<sup>1</sup> In an effort to further narrow the parties’ disputes, Samsung dropped the “networked” requirement from its proposed construction given the plain claim language already recites that the home devices are connected to the network. Samsung also added “electronic” to be consistent with TiVo’s proposal and the specification.



The '592 Patent discloses that the term “home device,” used in the context of the patent’s “Related Art,” encompasses “all electronic devices that are typically found in the home, with the exception of general purpose computers, (i.e. personal computers (PCs), laptop computers, etc.)” ’592 Patent at 1:26-32. While both parties’ proposed constructions track this disclosure, the parties’ dispute is whether a “home device,” as *claimed* in the '592 Patent, must also be “controllable,” as Samsung proposes.

The intrinsic evidence confirms the claimed “home device[s]” are controllable. First, claim 1 recites a “method for implementing command and control for home devices,” *plural*. ’592 Patent at 24:48-50. Although claim 1 concerns the scenario wherein a first home device controls a second home device, the specification makes clear that each networked home device, operating in accordance with the claimed invention, is controllable. For instance, the specification states “there is a need for a mechanism ... to enable user control and command of *any [home] device* that is currently connected to the network.” *Id.* at 2:15-19. Further, the specification makes clear that “[*e]ach home device* contains interface data ... that provides an interface for the commanding and controlling of the home device over the home network.” *Id.* at 4:12-16. Meaning, each connected home device, including both the “first home device” and “second home device” recited in the claims, is a controllable one.

2. “home network” (’592 Patent, claim 1)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“A system within the home to which any two or more devices may be connected and on which such devices may be controlled or exchange data. A home network exists independent of any particular device connected to it and independent of a connection to the Internet”

“Home network” is a familiar, readily understandable term that the patent does not specially define, and thus requires no further interpretation. The ’592 Patent specification and claims use “home network” consistently with its ordinary meaning, i.e. a network in someone’s home. ’592 patent claim 1; *see also id.* at 2:23-26 and 4:26-30; *see also* Ex. C (’592 File History, Nov. 27, 2006 Response at 11) (explaining to the Examiner that a room in a plant with robots would not comport with the preexisting “general understanding of a home network.”).

TiVo’s proposal should be rejected because it contradicts the plain claim language. For instance, TiVo’s proposed construction states that “two or more devices *may be connected*” to the claimed “home network.” The plain claim language, however, mandates that at least two devices—a “first home device” and a “second home device”—*must be* connected to the home network. TiVo’s proposed construction likewise states that “devices *may be controlled* or exchange data” on the claimed “home network.” But the claim language requires at a minimum that one device *must be* controlled over the network. ’592 patent claim 1 (reciting a “method for implementing command and control for home devices via a home network” and “controlling the second home device,” which is connected to the home network.).

The remainder of TiVo’s proposal—requiring that the home network exists without devices—is confusing and unfounded. TiVo’s construction does not detail how the claimed home network could exist absent any devices to provide networking functionality. TiVo’s construction would, for example, read on an unconnected computer cable sitting on the ground, to which (1) devices may be connected, (2) over which devices may be controlled, and (3) that exists independent of any devices, or an Internet connection. The specification does not support this interpretation nor evidence an intent to deviate from the plain meaning of “home network.”

3. “autonomous manner” (’592 Patent, claims 1, 5, 6, 12, 13, 15, 17, 18, 19)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“Associate home devices on a home network without human intervention”

Detecting autonomously, or in an “autonomous manner” requires no further interpretation. While the specification ascribes no specialized meaning to this term, it does, however, disclose examples of how the invention could perform the claimed detection process automatically, or on its own—i.e. in an autonomous manner. 11:47-12:56; *see also* Ex. D at 71 (U.S. Application No. 60/059,499, incorporated by reference in to the ’592 patent) (“When the Session Manager starts up, the first task it does is to probe the home network to detect all the devices. This probe will return a list of all devices on the network, and their current status”). This disclosure is consistent with the plain claim language.

Pertinent prosecution history confirms this term should be interpreted according to its plain meaning. The ’592 patent is a divisional of U.S. Patent Appl. No. 09/104,297, which—like the ’592 Patent—claimed functions carried out “autonomously.” During prosecution of that parent application, Applicant clarified that “autonomously” as used within the claims meant “automatically.” Ex. E (File History for U.S. Patent Appl. No. 09/104,297, 2002-12-30 Response at 5) (stating the prior art “does not provide a means that may autonomously (automatically) locate and access the devices”).

TiVo’s proposed construction is confusing at best and, at worst, a complete re-write of the limitation at issue. *Smartmetric Inc. v. Am. Exp. Co.*, 476 F. App’x 742, 744 (Fed. Cir. 2012) (“Construing ‘insertion ... into’ to also mean “passed near” would deviate from the term’s plain and ordinary meaning, conflict with the specification, and erroneously rewrite the claims.”) ’592 Patent claim 1 requires “***detecting*** presently connected home devices on the home network ***in an***

*autonomous manner.*” TiVo’s construction introduces a requirement that devices are “associated” on the network without human intervention. First, it is unclear whether TiVo’s proposal intends to replace the claimed “detecting” requirement with an association requirement. If so, the specification does not support this arbitrary substitution. The specification uses the claim language “detect,” when describing an applicable embodiment of the claimed functionality, and uses “associate” when describing unrelated functionality. Compare ’592 Patent at 2:15-17 (describing a “need for a mechanism that provides for dynamically updating the devices *detected* as connected to the network”) with *id.* at 11:53-55 (following device detection “a unique IP address and a logical name to be *associated* with the home device”). Also, during the ’592 patent’s parent’s prosecution history, Applicant clearly distinguished autonomous “detection” from “association.” Ex. E (File History for U.S. Patent Appl. No. 09/104,297, 2002-12-30 Response at 7) (stating “each logical device name is obtained by *autonomously detecting* that a device is connected to the network, and *associating* a logical device name with that device”). Second, it is unclear whether TiVo’s construction would require that home devices on the network are associated with each other, or with the network. Third, to the extent TiVo’s construction wishes to add the requirement that devices are both detected *and* associated, there is no basis for TiVo to introduce this additional requirement, as the plain claim language requires only autonomous “detecting.”

4. “capable of displaying a user interface” (’592 Patent, claim 1)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“Possessing its own display capability, i.e., comprising a screen for displaying HTML pages”

“Capable of displaying a user interface” means exactly what the plain claim language indicates and aligns with the specification. *See e.g.* ’592 Patent at 5:45-59, 14:49-54; 16:5-11.

Yet, TiVo again takes a readily understandable phrase and introduces unjustifiable limitations. TiVo's proposed construction would improperly require that a home device not merely be "capable of displaying a user interface,"—as the claim plainly reads—but that the home device must have its own display screen.

If Applicant had meant "comprising"—a term of art in claim drafting—Applicant presumably would have used that term. TiVo's "comprising" proposal is consequently overly narrow and contradicts the specification. The '592 Patent specification explicitly differentiated devices that comprise their own display screen from those that are capable of displaying—i.e. on their own screen or via output to a separate screen. The '592 patent acknowledges that a television, for example, "comprises a screen for displaying..." 5:65-66. Whereas, a DVCR, a device without a built-in video screen, is nevertheless "*capable* of performing, e.g., the *capabilities of a DVCR generally include* 'accepting video' and '*displaying video*.'" '592 at 16:5-11 (emphasis added). The inventors knew how to describe a device comprising its own screen for displaying a user interface, but elected to claim, instead, the "capability" to display a user interface.

Further, TiVo's requirement that the displayed user interface must be in HTML format endeavors to convert an exemplary embodiment into a claim requirement. The specification identifies HTML as one format option for user interface data, stating "[e]ach home device contains interface data (e.g. HTML, XML, JAVA, JAVASCRIPT, GIF, JPEG, graphics files, or any other format useful for the intended purpose)." '592 Patent at 4:12-15. Claim 1 is not limited to any *one* of these format types. In fact, dependent claim 4 specifically requires that the user interface data format be one of HTML, XML, JAVA, JAVASCRIPT, GIF, and JPEG. '592 Patent at claim 4. Thus, claim 1 is necessarily broader, and not limited to any single format identified in

claim 4. *InterDigital Commc'ns, LLC v. Int'l Trade Comm'n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012) (“The doctrine of claim differentiation is at its strongest in this type of case, where the limitation that is sought to be read into an independent claim already appears in a dependent claim.”) (internal citations omitted).

5. “configuration manager” (’592 Patent, claims 5, 6, 7, 17, 18)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	Software that dynamically allocates a unique IP address and logical name for each home device that becomes available on the home network and that is capable of maintaining the IP address and logical name pairs of each home device that becomes available on the home network

The plain claim language already recites the requirements for the “configuration manager.” Claim 5 indicates that the “configuration manager” can (1) get a “signal[] ...that the first home device is connected to the home network,” and (2) “maintain a list of home devices that are currently connected to the network.” ’592 Patent claim 5. Other dependent claims add further characteristics of the claimed “configuration manager.” *See* ’592 Patent claims 6, 7, 17, 18. These “configuration manager” functions comport with the specification’s description. *See e.g.*, ’592 Patent at 10:46-11:46. TiVo’s proposed construction is thus unnecessary and improper.

More specifically, TiVo’s proposed construction incorrectly reads exemplary configuration manager functions from the specification into the claim as added requirements. For instance, TiVo’s construction requires a “configuration manager” to “dynamically allocates a unique IP address and logical name for each home device that becomes available on the home network.” The specification does indeed contemplate the configuration manager performing this function in certain embodiments. ’592 Patent at 10:57-60. But the specification also discloses an embodiment where the configuration manager uses a “predefined IP address,” instead of

employing the dynamic allocation that TiVo's proposed construction requires. *Id.* at 11:4-8. The claims are silent on the configuration manager's specific role in IP address assignment, thus TiVo cannot import any such requirements from the specification into the claims.

TiVo's additional proposal that the configuration manager is "capable of maintaining the IP address and logical name pairs" is effectively not a requirement at all, and another attempt to import a limitation not found in the claims. First, the intention behind TiVo's proposal that the configuration manager must be "capable of" maintaining name/address pairs remains unclear. Given that the patent's configuration manager would operate in software running on hardware, any such software would be theoretically "capable of" storing name/address information—thus making TiVo's additional requirement superfluous and unnecessary. Alternatively, if TiVo meant that the "configuration manager" *must* maintain this information, TiVo is incorrect because the claims contain no such requirement. Claim 5 bears this out by plainly reciting that the configuration manager maintains a list of devices without further specifying precise information that the list must maintain.

In sum, TiVo cannot inject limitations based only on selected examples found in the specification. *JVW Enterprises, Inc. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005) ("We do not import limitations into claims from examples or embodiments appearing only in a patent's written description....") TiVo's construction also improperly proposes vague and/or superfluous requirements. For at least these reasons, the Court should reject TiVo's proposed construction.

**C. U.S. Patent No. 8,233,090****1. “linkage viewing” (’090 Patent, claims 1, 2)**

<b>Samsung’s Proposed Construction</b>	<b>TiVo’s Proposed Construction</b>
<p>No construction necessary.</p> <p>Alternatively, “to successively view via a second device, a program being viewed via a first device”</p>	<p>“Successively viewing presently broadcasted TV programming without interruption and without special manipulation of the user (i.e., powering on the TV, changing the channel, etc.) on a TV and a mobile communication apparatus”</p>

Claim 1’s plain language details what constitutes “linkage viewing,” because the steps set forth in the claim sufficiently explain the process. First, “linkage viewing” is initiated when a linkage viewing command is received. Next, data information necessary to carry out the linkage viewing process is received. Finally, a channel and program is selected for viewing on the second device (e.g. via a cable box) that mirrors the program being watched on the mobile device before the linkage viewing process began.

The claim’s recitation of “linkage viewing” therefore follows the specification’s “linkage viewing” descriptions. ’090 Patent at 1:21-26 (describing “a method of linkage-viewing a TV broadcasting program between a mobile communication apparatus and a digital TV... which enable[s] a user to successively view a TV broadcasting program there between”); *see e.g. id.* at 5:25-28; 6:20-28. To the extent the Court believes further construction would assist the jury, Samsung proposes “linkage viewing” be construed to mean “successively viewing via a second device, a program being viewed via a first device,” again consistent with its use in the claims and specification.

TiVo’s proposed construction introduces unnecessary limitations; for instance, it requires that the viewed program is “presently broadcasted.” Neither the claims, nor specification, restrict the invention in this way. To the contrary, claim 1 requires only that the “program ... is being



viewed on the mobile communication apparatus” and that the program was “received from a broadcaster,” not that the program must be “presently broadcasted.” During prosecution of the ’090 patent, Applicant amended the claims to clarify that “linkage viewing” concerned a “program” that did not necessarily need to be a presently “TV broadcast[ed] program”:

inputting-receiving a TV-linkage-viewing command in order to linkage view a TV  
broadcasting program which is being viewed on the mobile communication apparatus, on the  
digital TV;

Ex. F (’090 File History, 2011-11-22 Response at p. 2). TiVo’s construction appears directed to manufacturing a partial non-infringement defense given its devices often replay recorded video. But claim construction should be performed in light of the patent’s intrinsic evidence, not based on the accused products. *SRI Int’l v. Matsushita Elec. Corp. of Am.*, 775 F.2d 1107, 1118 (Fed. Cir. 1985) (“It is only *after* the claims have been *construed without reference to the accused device* that the claims, as so construed, are applied to the accused device to determine infringement.”) (emphasis in original) (citations omitted).

Second, TiVo’s construction is vague and would necessitate still further construction. TiVo’s construction requires “successively viewing” a program “without interruption.” It is not clear whether these are two separate requirements, and if so, what each would require, or whether the proposed language is redundant. Such a requirement does not clarify the meaning of this term, but only makes it harder for a jury to apply. *Oasis Research, LLC v. AT & T Corp.*, No. 4:10-CV-00435, 2012 WL 602199, at \*24 (E.D. Tex. Feb. 23, 2012) (rejecting the defendant’s insertion of vague requirements into a construction because “[t]he inclusion of such language does not clarify the meaning of the claim term to the jury, but would actually require further construction ... in order to be of assistance for the jury.”)

Third, TiVo’s proposed limitation that the linkage viewing is “without special manipulation of the user” is likewise vague (without additional context) and unjustly limiting. TiVo imports its “without special manipulation” requirement from a description in the specification. The specification states that an aspect of the invention could allow it to be carried out “without any special manipulation of the user.” But, the specification then states that objective is achieved by performing steps like those set forth in claim 1. (’090 Patent at 2:24-43). TiVo’s construction offers its own separate, open-ended interpretation of what “special” manipulation requires. For example, TiVo contends that “powering on the TV” would be “special manipulation.” The requirement that a signal is sent to turn on the TV is a requirement introduced by claim 6 and is therefore not a claim 1 limitation. *InterDigital Commc’ns*, 690 F.3d at 1324. TiVo then leaves its construction open—by using an etcetera—forcing the fact finder to decide what additional types of manipulations could be “special” manipulation—as opposed to standard manipulation. Such subjective determinations of claim scope should not be left for the jury to resolve. *Creative Internet Advert. Corp. v. Yahoo!, Inc.*, 476 F. App’x 724, 728 (Fed. Cir. 2011) (“The court erred in leaving a central question of claim construction to the jury over [a party’s] objection.”).

2. “linkage viewing command” (’090 Patent, claims 1, 2)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“An instruction sent between a TV and a mobile communication apparatus to initiate linkage viewing that includes data information”

This claim term is readily understood, without construction, to mean a command used to initiate “linkage viewing.” This plain language comports with the specification’s description of the term. ’592 Patent 4:13-15 (discussing receiving “a TV linkage viewing command in order to

successively watch a TV broadcasting program which is being viewed on the mobile communication apparatus, on the digital TV.”), 2:44-46; 5:45-53.

TiVo seeks to inject two limitations that find no basis in the claim language and contradict the intrinsic record. TiVo first proposes the command *must* be sent between a TV and mobile communication apparatus. TiVo would thus contradict the plain claim language, which requires “receiving a linkage viewing command” *without* specifying the component or entity that does the receiving. The specification also discloses that the linkage viewing command can be input, and thus received, at the mobile communication apparatus, again directly contradicting TiVo’s proposed construction. ’090 Patent at 2:44-47 (“the inputting the TV linkage viewing command is achieved using a TV linkage-viewing button which is provided in the mobile communication apparatus”). A proposed construction which, like TiVo’s, “excludes the preferred embodiment is rarely, if ever, correct and would require highly persuasive evidentiary support,” which is not present here. *Adams Respiratory Therapeutics, Inc. v. Perrigo Co.*, 616 F.3d 1283, 1290 (Fed. Cir. 2010). Although dependent claim 2 places a requirement on how the “linkage viewing command” is received, i.e. “through the mobile communication apparatus,” claim 1 places no such requirements on the “linkage viewing command.” Further, during prosecution, the Applicant amended the claims to remove the requirement that the linkage viewing command be transmitted between the mobile and a TV—as TiVo’s construction contemplates—modifying the claim for broader application:

~~transmitting~~ receiving data information on the program from the mobile communication apparatus ~~to the digital TV according to the input of~~ in connection with the TV-linkage viewing command; and

Ex. F, (’090 File History, 2011-11-22 Response at p. 2)

TiVo also improperly argues a linkage viewing command must *include* the claimed “data information.” Claim 1 requires that “data information” is received “*in connection with* the linkage viewing command,” not that the data information is included within the command itself.

3. “selecting a TV channel corresponding to a current channel on which the program is being viewed on the mobile communication apparatus based on the received data information” (’090 Patent, claim 1)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“Tuning the TV to the current channel bearing the presently broadcasted <sup>2</sup> TV programming being viewed on the mobile communication apparatus as a result of receiving information about that programming from the mobile communication apparatus”

This claim term comprises non-technical, understandable terms that require no further construction. The plain language also comports with how the specification describes this aspect of the inventive method. ’090 Patent at 6:20-28 (“The controller 223 ... controls a TV channel of the digital TV to be selected and changed to the same channel as the currently viewed channel of the mobile communication apparatus 210, based on the data information which has been received through the communication unit 222.”), 2:39-43, 6:35-7:9.

TiVo’s construction rewrites the claim in a manner inconsistent with the patent’s disclosure. TiVo’s construction first amends the claim, which reads “selecting a channel” to require “tuning the TV” to a channel. Particularly in the context of the ’090 Patent, selecting does not require tuning. Tuning a TV is a specific technical operation that allows a TV to display a particular channel that the TV tuner can receive. TV tuning is not described, or even mentioned, in the ’090 Patent. Moreover, the specification expressly, and repeatedly,

<sup>2</sup> TiVo attempts, again, through this proposed construction to add a “presently broadcasted” requirement into the claims. Such a requirement is unjustified for the same reasons set forth in § IV.C.1.

distinguishes “selecting” a TV channel, as that term is used in the ’090 patent, from actually “changing” to the TV channel—the latter process could require tuning. ’592 Patent at 7:6-8) (“Then, the controller 223 *selects and changes the TV channel* to the same channel as the current channel which is being viewed on the mobile communication apparatus”); *see also id.* at 6:66-67; 7:49-51; 7:56-58. Put another way, if selecting a channel meant tuning a TV to the channel, as TiVo contends, then the ’090 specification’s description of selecting, then tuning, would be nonsensical.

4. “displaying the program, received from a broadcaster independently of the mobile communication apparatus” (’090 Patent, claim 1)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
<p>No construction necessary.</p> <p>Alternatively, “displaying the program, received from a source that is not the mobile communication apparatus.”</p>	<p>“Displaying on the TV, without interruption or user manipulation, the same, presently broadcasted TV programming that was being viewed on the mobile communication apparatus, whereby the broadcast source of that programming is different from the source of the programming viewed on the mobile communication apparatus and is not sourced by the mobile communication apparatus”</p>

Here again, the plain claim language controls. The Applicant added the latter portion of this claim (i.e. “received from a broadcaster...”) during prosecution, thereby confirming this term’s plain meaning. Specifically, Applicant confirmed that the phrase “received from a broadcaster independently of the mobile communication apparatus” meant—as the plain language indicates—that the program’s source was a broadcaster, i.e. the mobile phone did not send the program directly for display. Ex. F (’090 File History, 2011-12-16 Response at 11) (stating the “Lee [prior art] merely displays images that are received from the mobile phone...Applicant has amended independent claims to clarify that the program displayed on the selected TV channel is received from a broadcaster.”). TiVo’s construction appears partially

intended to capture this concept by stating the programming “is not sourced by the mobile communication apparatus.” To the extent the Court does not believe the plain language sufficiently renders this aspect of claim scope clear, Samsung would propose this term be construed as “displaying the program, received from a source that is not the mobile communication apparatus.”

But TiVo does not stop there. TiVo’s proposed construction then tries to use the plain claim language “broadcaster independently of the mobile communication apparatus,” whose meaning was confirmed in prosecution, to introduce another unjustified limitation: that the “broadcast source of that programming is different from the source of the programming viewed on the mobile communication apparatus.” Neither the patent specification nor claims support this additional limitation.

TiVo also attempts to re-argue three out-of-place limitations that TiVo similarly embedded in its other proposals. Namely, TiVo’s proposed constructions for “linkage viewing” and the “selecting a TV channel...” term (discussed above) already advance TiVo’s “without interruption or user manipulation,” and “presently broadcasted” arguments. Those limitations are unjustified no matter where TiVo tries to import them, but they make even less sense embedded in this term, which relates only to displaying a program and that program’s source.

5. “receiving the linkage viewing command through the mobile communication apparatus” (’090 Patent, claim 2)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“Where the linkage viewing command is received by and processed by the mobile communication apparatus without user intervention”

Claim 2 specifies in plain terms the path the linkage viewing command must take to satisfy that dependent claim. The specification discloses examples of how the linkage viewing

command can be received, consistent with claim 2’s plain language. ’090 Patent at 2:43-46 (“According to an aspect of the present invention, the inputting the TV linkage viewing command is achieved using a TV linkage-viewing button which is provided in the mobile communication apparatus.”); see also *id.* at 4:7-15; 6:3-11.

TiVo’s construction rewrites the plain claim language to add a limitation not found in the claim. Specifically, TiVo’s construction requires that the linkage viewing command not only be received through the mobile apparatus, but must also be “processed by the mobile communication apparatus.” Had patentee meant for that to be a claim limitation, it would appear in the express claim language. It does not. Further, TiVo leaves open what type of “processing” would be required, leaving the claim scope improperly subject to further interpretation. *Oasis Research*, 2012 WL 602199, at \*24.

TiVo then makes its third attempt to include a “without user intervention” requirement. TiVo already proposed this requirement be added to two other claim terms, albeit using slightly different language (“without special manipulation of the user” and “without...user manipulation”). See *supra* §§ IV.C.1., IV.C.4. This requirement has no place in the claims for reasons discussed previously. TiVo’s proposal should consequently be rejected.

6. “wherein the data information comprises at least one of broadcasting station information and a channel number” (’090 Patent, claim 4)

Samsung’s Proposed Construction	TiVo’s Proposed Construction
No construction necessary.	“Wherein the data information contained within the linkage-viewing command includes either or both of broadcasting station information or a channel number sufficient to ‘select[] a TV channel corresponding to a current channel on which the program is being viewed’ ...etc.”

This limitation, found in dependent claim 4, specifies in plain terms two specific types of information that may be included as part of claim 1’s “data information,” namely broadcasting information, channel number, or both.<sup>3</sup>

TiVo apparently agrees that the plain claim language needs no further interpretation because TiVo’s construction mostly leaves the plain claim language intact. TiVo instead uses this claim term to argue, again, that all data information must be contained “within the linkage viewing command.” *See supra* § IV.C.2. This is wrong for at least the reasons set forth above in § IV.C.2. TiVo also appends to the plain claim language a requirement that the types of data information specifically identified in claim 4—broadcasting station information or channel number—must alone be sufficient to carry out the claim’s “selecting a TV channel” limitation. Neither the plain claim language nor the patent specification require this. The claim requires only that at least one of broadcasting station information or channel number be included in the data information. The claim does not preclude a scenario where (1) additional information present within the data information (other than broadcasting station information or channel number), or (2) additional information on the receiving end are required to “select [] a TV channel....” Claim 1 makes this point clearer given that it states “selecting a TV channel” is merely “*based on the received data information.*”

## **V. CONCLUSION**

The Court should adopt Samsung’s proposed constructions for the reasons above.

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<sup>3</sup> Both parties appear to agree that “at least one of” means one or the other or both, which is clear from plain claim language.



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Respectfully submitted,

By: /s/ Christopher O. Green

Ruffin B. Cordell

TX Bar No. 04820550

cordell@fr.com

Michael J. McKeon

D.C. Bar No. 459780

mckeon@fr.com

Michael C. Tyler

TX Bar No. 24051454

tyler@fr.com

FISH & RICHARDSON P.C.

1425 K Street N.W., 11th Floor

Washington, DC 20005

Telephone: (202) 783-5070

Facsimile: (202) 783-2331

Thad Kodish

Georgia Bar No.: 427603

TKodish@fr.com

Christopher O. Green

Georgia Bar No. 037617

cgreen@fr.com

Noah C. Graubart

Georgia Bar No.: 141862

graubart@fr.com

Ajit Dang

Georgia Bar No. 352611

Dang@fr.com

FISH & RICHARDSON P.C.

1180 Peachtree Street NE, 21st Floor

Atlanta, GA 30309

Telephone: 404-892-5005

Facsimile: 404-892-5002

Melissa R. Smith

State Bar No. 24001351

GILLAM & SMITH, LLP

303 South Washington Avenue

Marshall, Texas 75670

Telephone: (903) 934-8450

Facsimile: (903) 934-9257

melissa@gillamsmithlaw.com

***Counsel for Samsung Defendants***

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that a true and correct copy of the above and foregoing document has been served on September 12, 2016 to all counsel of record via electronic mail.

/s/Melissa R. Smith